Women's Labour Market Position and Divorce in the Netherlands

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Women's labour market position and divorce in The Netherlands:

Evaluating economic interpretations of the work effect.

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Abstract. This article studies the influence of women's work on the risk of divorce, using data from The Netherlands. We examine economic interpretations of the work effect by disentangling the work effect into five dimensions: (a) the intensity of wife's work, (b) the status of wife's work, (c) potential labour market success, (d) relative labour market success (vis-à-vis the husband), and (e) the division of domestic labour. Our results show that working women have a 22 percent higher risk of divorce than women who do not work. Subsequently, our findings show that there is no significant positive effect of women's economic occupational status on divorce and that labour market opportunities have little effect. In addition, the influence of the division of labour on divorce is not relative, not symmetric, and does not extend to domestic labour. All in all, these findings do not support economic interpretations of the work effect and confirm earlier criticisms arguing that sociological interpretations are more promising. This line of reasoning is further confirmed by our finding that the effect of wife's work on divorce has decreased while the effect of husband's contribution to domestic work on divorce has increased.

1. Introduction

One of the most influential hypotheses on divorce is that a traditional division of labour between husband and wife is beneficial to marital stability. When the wife specializes in housework and child care, and the husband specializes in labour market work, the risk of divorce is presumed to be lower. Because the rise in divorce is paralleled by an increase in the number of working women, the division-of-labour hypothesis has become a common theme in demographic and sociological research. As a result, virtually all studies on divorce include women's economic characteristics such as labour force participation, education or income.

In sociology, the notion that a traditional division of labour fosters marital stability goes a long way back (Parsons, 1949). The division-of-labour hypothesis became especially popular when micro-economists began to study the family in the 1970s, a time of rapid demographic change (Becker, 1981). Micro-economic theory basically presents two arguments for the division-of-labour hypothesis, the independence argument and the specialization argument. First, women who work are financially independent, which makes it easier for them to leave a marriage. The husband also might feel it is easier to end the marriage when his wife is able to support herself. Second, specialization increases the financial gains to marriage due to greater efficiency inside marriage. Just as in a factory, household goods are more efficiently produced when spouses divide tasks.

Sociologists have criticised micro-economic theory and have offered alternative arguments for the division-of-labour hypothesis (e.g., Simpson and England, 1981; Berk and Berk, 1983; Oppenheimer, 1995). One obvious point of criticism is that micro-economic theory ignores non-financial benefits of marriage, while the decision to divorce is often motivated by social-psychological reasons. An important sociological argument is that women's work is contrary to traditional norms and expectations, which might lead to

competition and tension between spouses and which may decrease marital satisfaction. A second point of criticism is that it is unclear how specialization in housework would increase the gains to marriage. Specialization in the labour market obviously brings pecuniary benefits, but for specialization in the household the argument is less straightforward. Sociologists point at the advantages of a more equal division of labour in the household, such as greater marital satisfaction when spouses divide tasks more equally.

Despite these criticisms, there is a fair amount of empirical evidence, mostly American, favouring the division-of-labour hypothesis. Marriages in which the wife works run a higher risk of divorce than marriages in which the wife is not employed (Cherlin, 1979; Spitze and South, 1985; South and Spitze, 1986; Greenstein, 1990; Tzeng and Mare, 1995; Babka von Gostomski et al., 1998; South, 2001). The evidence mostly pertains to whether or not the wife works or to wife's working hours. If other aspects of wife's labour market position, such as her income, education or work experience, are taken into consideration, the evidence is less clear-cut (Spitze and South, 1985; Greenstein, 1990; Diekmann and Klein, 1991; Hoffman and Duncan, 1995; Babka von Gostomski et al., 1998; Ono, 1998; Berrington and Diamond, 1999).

In The Netherlands, the findings are less supportive, but the number of studies is small (Manting, 1993; Pit and Rouwendaal, 1994; De Graaf and Kalmijn, 1999; Fokkema and Liefbroer, 1999). Only two of four Dutch studies find that wife's work is positively related to divorce probabilities (De Graaf and Kalmijn, 1999; Fokkema and Liefbroer, 1999). Other aspects of wife's labour market position have rarely been examined. One reason for this scanty evidence might lie in the extensive Dutch welfare system which makes women financially independent, at least at some minimum level. Virtually all divorced women are entitled to welfare payments after divorce. The weak support for the division-of-labour hypothesis might also be due to the lack of appropriate longitudinal data. So far, most Dutch

studies do not include information about the labour market characteristics of the (former) husband, they only include a few basic labour market characteristics of the wife, and they focus on either old or young birth cohorts.

In this article, we re-examine the division-of-labour hypothesis using data from a large-scale retrospective survey in The Netherlands. We improve upon earlier research in two important respects. First, we study a broad range of wife's labour market characteristics. On the basis of micro-economic and sociological theories, we distinguish five dimensions of women's labour market position which might influence divorce: (a) the intensity of wife's work, (b) the status of wife's work, (c) potential labour market success of the wife, (d) relative labour market position of the wife, and (e) the division of labour in housework and child rearing. Our general question is whether women with a better labour market position are more likely to divorce, and if so, which dimensions are most important in this respect. By disaggregating the influence of work into these five dimensions, we gain more insight into the reasons why a traditional division of labour stabilises marriage. In particular, we focus on the classic micro-economic arguments and hope to find out to what extent financial reasons underlie the destabilising influence of wife's work. We also try to provide clues to the question of whether more sociological interpretations of the work effect are plausible. All the interpretations we examine assume that wife's work affects divorce and not vice versa. An important alternative interpretation is that the risk of divorce increases wife's labour market participation, because she anticipates a divorce. Ruling out such interpretations is a difficult task which would require a separate and different type of analysis (Johnson and Skinner, 1986).

Our second contribution is that we assess whether the relation between women's labour market position and divorce has changed over time. The majority of earlier studies have studied the relation between wife's work and divorce from a static perspective, that is, at

one moment in time. An Australian and a German study, however, have shown that the destabilising influence of women's full-time work has decreased over time, which is not surprising in light of the cultural changes surrounding women's work (Bracher et al., 1993; Beck and Hartmann, 1999). The growing acceptance of women's employment and the shift from traditional to egalitarian sex-role patterns, suggest that women's work has become less disruptive to marriage. A more recent American study, however, has shown that the positive effect of women's employment on the risk of divorce has increased over time, which is contrary to common expectations (South, 2001). To address changes over time, we examine whether the influence of wife's labour market position on divorce differs between two marriage cohorts for each of the five dimensions. Differences between the cohorts in the effect of wife's labour market characteristics will show whether and which labour market characteristics have lost their negative impact on marital stability.

2. Theoretical background

Both micro-economic and sociological theories have argued that a traditional division of labour decreases the risk of divorce, but they have done so for different reasons. Given the diversity in micro-economic and sociological arguments, the question is which labour market characteristics of the wife increase the risk of divorce. We distinguish five dimensions of wife's labour market position and for each of these dimensions, we explain how, according to micro-economic and sociological theories, they should affect the likelihood of divorce. Because micro-economic arguments have become dominant in the research literature on divorce, our main focus is on the arguments put forward by micro-economic theory. We also

address sociological arguments when predictions from sociological theory are different from the predictions derived from micro-economic theory.

2.1. Intensity of wife's work

The first and most obvious dimension of wife's work refers to whether or not the wife works and how many hours she works. According to micro-economic theory, the risk of divorce not only depends on whether the wife works, but also on the number of working hours. The more the wife works the less the efficiency gain and the greater her financial independence, which increases the risk of divorce.

2.2. Status of wife's work

The second dimension refers to the status of wife's work. Among working women, is there also an influence of the status of her work? The status of work can either refer to financial aspects or to more cultural aspects. Both micro-economic and sociological theory predict that the status of wife's work affects divorce. Micro-economic theory focuses on financial aspects, in particular income. Income should affect divorce positively, given the greater financial independence that is associated with a higher income.

Sociological theory focuses on cultural aspects, such as the degree to which the work offers opportunities for self-realisation and the extent to which the job offers a progressive cultural environment. Work that gives women opportunities for self-realisation or social recognition might increase the risk of divorce, because women are less dependent upon the marriage in a social or psychological sense. More importantly, women employed in cultural sectors of the labour market will probably have less traditional and more emancipatory

attitudes than other women. Emancipatory women are probably more likely to divorce, because they do not think it is morally wrong to leave their husband and probably have less difficulty with the prospect of establishing an independent household after divorce. As a result, we would expect that the risk of divorce increases with the cultural status of women's work.

2.3. Potential labour market success of the wife

The third dimension addresses the question of whether the potential rather than the actual financial situation influences the likelihood of divorce. Most research has focused on the actual income position of the wife during the marriage, such as the number of working hours or current income (Spitze and South, 1985; Ono, 1998). According to micro-economic theory, however, the potential financial situation after divorce influences the risk of divorce as well (D'Amico, 1983; Peters, 1993). Especially among non-working women, there is considerable variation in the degree of financial independence, depending upon the amount of human capital they have, such as their educational attainment and work experience. Women who are already employed during the marriage are also capable of improving their financial situation to various degrees, depending on their human capital. Micro-economic theory thus suggests that women with greater potential labour market success have a higher probability to divorce.

2.4. Relative labour market position of the wife

Should the effect of the labour market position of the wife be seen in relationship to the labour market position of her husband? In light of women's financial independence, not only women's labour market characteristics play a role but also the characteristics of the husband

(Cherlin, 1979, p. 153). Women who have the same earnings might still differ in the extent to which they are financially dependent upon the marriage, depending upon the income of their husband. Women with a high earning husband have financially more to lose after a divorce than women with a low earning husband. The efficiency interpretation also implies that especially relative measures of wife's labour market position should matter (Oppenheimer, 1997, p. 443). For example, couples in which the wife works part-time will have fewer specialization gains when the husband also works part-time than when he works full-time.

The specialization argument can be taken one step further, by arguing that the specialization effect is symmetric. If specialization reduces the risk of divorce because of the greater efficiency gains, it should not matter whether the husband specializes in the labour market or the wife. All else being equal, couples who divide paid labour equally are expected to have the highest divorce risk, and the divorce risk is expected to decrease when couples move toward a greater degree of specialization, regardless of whether the wife or the husband is the main provider. Contrary to micro-economic theory, sociological theory does not expect the specialization effect to be symmetric. In light of traditional role expectations, only specialization by the husband should reduce the probability to divorce, because the husband is expected to be the main breadwinner. When the wife is the one who specializes in the labour market, both husband and wife do not live up to traditional role expectations, which should increase the probability of divorce.

2.5. Division of labour in housework and child rearing

The last dimension refers to the division of unpaid labour. Just as for specialization in the labour market, one might ask whether specialization in the household affects the likelihood of divorce. Following the micro-economic argument that specialization yields efficiency gains,

one would expect that specialization in housework and child rearing lowers the risk of divorce. Sociological theories, however, whether this is true. A more egalitarian division of housework may be perceived as more fair and therefore lead to greater marital satisfaction, which decreases the likelihood of divorce (Huber and Spitze, 1980; Wilkie et al., 1998; Kalmijn, 1999).

3. Research design

To answer our research questions, longitudinal data are needed. Prospective data are ideal, but these do not exist in The Netherlands. Retrospective life history surveys are available, but the sample sizes of these data sets are often too small to facilitate reliable and comprehensive analyses of divorce. To develop better insights into the causes and consequences of divorce in the Netherlands, a new survey was designed, based on a retrospective method and a stratified design, the survey called 'Divorce in The Netherlands 1998' (Kalmijn, De Graaf and Uunk, 2000).

In the first step of the data collection, a select sample of 19 municipalities was drawn, which are representative of the Dutch population with respect to urbanisation and region. In the second step, three random samples were drawn from the population registers of these municipalities: (a) people in their first marriage, (b) people who divorced and did not remarry, and (c) divorced people who remarried. As a consequence, ever divorced persons are overrepresented. People who have become widowed are not included in the sample. The sample also does not include persons who are cohabiting or persons who separated from a cohabiting union. Although cohabitation has increased in The Netherlands like elsewhere (Manting, 1994), and the determinants of separation might be different for cohabiting couples

(Brines and Joiner, 1999), the municipal registers did not allow us to preselect cohabiting persons. However, we do have information about whether the couple cohabited before they got married, and we include this variable in all our models.

For our analysis, we select female respondents who are either in their first marriage or divorced from their first marriage. After excluding a few cases with missing values on central characteristics (year of divorce, year of marriage and timing of employment), we have data on 1294 women. The women married between 1943 and 1997 and divorced between 1949 and 1998. The respondents were interviewed face-to-face in their home by means of a structured questionnaire in the absence of other household members. They provided retrospective information about their labour market career and also reported on a select set of labour market characteristics of their (former) spouse.

3.1. Event history analysis

To analyse how the division of labour affects the risk of divorce, we use event history analysis (Brown, 1975; Allison, 1984; Yamaguchi, 1991). There are both continuous-time and discrete-time versions of these models. We use the discrete-time version, which is a simple and good approximation of continuous-time models as long as the conditional probabilities of experiencing the event (in this case, divorce) are reasonably small at the discrete time points (Yamaguchi, 1991, p. 17). In our case, the conditional probabilities never exceed 0.1, which means that discrete-time models are a good approximation. Our dependent variable is the conditional probability to divorce in year *t*, given that one is still at risk of divorcing at the beginning of year *t*. Divorce refers to the moment when the couple stopped living together.

To estimate a discrete-time event history model, one needs to create a person-period file and apply logistic regression to this file (Allison, 1984, pp. 18-19). A person-period file

contains a record for each person for each time unit in which this person is at risk. In our case, the risk period starts with the year of marriage and ends with the year of divorce. To take into account right censoring, persons who are not divorced remain in the person-period file until the survey year. Earlier applications of this method can, for example, be found in Ono (1998) and South (2001) for divorce and in Lichter et al. (1992) for the entry into marriage.

An advantage of applying discrete-time event history models is that they rely on logistic regression techniques. These techniques are insensitive to sampling on the dependent variable, in that an overrepresentation of one of the two categories does not change the estimates of the coefficients (Allison, 1999a). In our case, we have an overrepresentation of divorced persons, and while this will affect the overall annual conditional probability of divorce, it will not affect differentials in the probability of divorce and therefore not the coefficients.

3.2. Measures

To assess whether wife's work increases the risk of divorce, we study the effect of several labour market characteristics for each of the five dimensions. For each dimension we use multiple indicators. Below we present the indicators for each dimension and their measurement. The descriptive statistics are shown in Table 1.

[Here Table 1]

Intensity of wife's work

Whether or not the wife works. A relatively crude indicator is a dynamic variable indicating whether the wife works for pay or not. Just as the other dynamic labour market characteristics of the wife, this variable is lagged and refers to the year before the risk year. If we do not lag the variables, the effect of wife's work would be overestimated due to a group of women who started to work (more) in the year of their divorce. The group of women who do not work includes both inactive and unemployed women. Although these groups might have different risks of divorce (Berrington and Diamond, 1999), we were not able to make such a distinction.

Part-time and full-time work wife. A further distinction is made by creating two dynamic variables indicating whether the wife works part-time (1-34 hours versus no work) or full-time (over 34 hours versus no work).

Number of working hours wife. Number of weekly working hours, but now measured as a continuous variable, ranging from 0 to 40.

Status of wife's work

Economic status of wife's occupation. This indicator follows from micro-economic theory and is used as an indirect measure of income. Because we do not have retrospective income data, we use a dynamic variable measuring the economic status of wife's occupation, that is, the occupational income according to the scale of De Graaf and Kalmijn (2001). In particular, economic status is measured as the average monthly net income in an occupation (in guilders).

Cultural status of wife's occupation. The second indicator stems from sociological theory and is the cultural occupational status of the wife, that is, the occupational educational level as measured by the scale of De Graaf and Kalmijn. This measure indicates the extent to which a job offers opportunities for self-realisation and social recognition and will be related to emancipatory attitudes. Cultural status is dynamically measured and calculated as the average educational level of the people working in an occupation. The correlation between economic status and cultural status is high (r=0.71), which might lead to problems of multi-collinearity. Because the number of women in our sample is reasonably large, however, models including both economic and cultural status could be estimated without problems.

For both status scores, our theoretical interest is in assessing the effect of status *for working women*. We therefore do not impute individual status scores for non-working women, for instance by estimating status scores on the basis of other individual variables in the data. Instead, we include a variable indicating whether the woman is working or not, and assigned a single score for non-working women (which in this case, is the average score). This method has three advantages. First, it implies that the effect for work refers to the difference between non-working women and women working in an average occupation. Second, and more importantly, the effect of the occupational status variables refers to working women only. The

status effect will be the same, regardless of what score we assign, as long as it is the same score for all (non-working) women and as long as the dummy-variable for work is included in the model. Third, this method allows us to estimate status effects while retaining non-working women in the sample.

Potential labour market success of the wife

Educational attainment of the wife. The first indicator here is a dynamic variable indicating the highest completed level of education of the wife, measured in formally required years and ranging from 6 to 16 years.

Work experience of the wife. The second indicator of wife's investments in the labour market is a dynamic variable indicating the number of years that the wife has worked during the marriage (for both working and non-working women). Work experience refers to the total amount of human capital accumulated over the years, but does not take into account that wife's human capital depreciates over time; recent work experience is worth more on the labour market than work experience accumulated a long time ago.

Number of years since the wife left the labour market. An alternative indicator of wife's investments in the labour market is a dynamic variable measuring how many years the wife has been out of the labour market. This variable only refers to non-working women. Working women are given a score of zero. Contrary to work experience, this indicator takes into account that wife's human capital depreciates over time, but does not take into account the total amount of human capital.

Relative labour market position of the wife

Wife's share in working hours. The first relative measure is the dynamically measured ratio of the number of working hours of the wife and the total number of working hours of husband

and wife. When both the husband and the wife do not work, the ratio is set to 0.50. We control for the total number of working hours.

Wife's share in education. The second relative measure is a dynamic variable indicating the ratio of the wife's years of schooling and the total of the years of schooling of the spouses. We control for the total years of schooling of the spouses.

Wife's share in economic status. The third indicator is the relative economic status of the wife, dynamically measured as the ratio of the economic occupational status of the wife and the sum of the economic status of the husband and the economic status of the wife. We control for the total economic status of the couple. These variables only pertain to dual-earner couples. For other couples, we imputed the average scores for the ratio and the total economic status.

Wife's share income. The fourth indicator measures wife's income in relation to her husband's income. We do not have retrospective income data, but respondents were asked how much they contributed to the household income during the first years of marriage, ranging from 1 'virtually nothing' to 5 'almost everything'. We recoded this variable to a scale ranging from 0.10 to 0.90, which can loosely be interpreted as the percentage which the wife contributed to the household income.

Division of labour in housework and child rearing

Division of housework tasks. The division of housework is measured retrospectively. The respondent was asked how she and her husband divided five housework tasks (cooking, laundry, cleaning, odd jobs and financial administration) during the first years of marriage, ranging from 1 'respondent much more than spouse' to 5 'spouse much more'. The variables therefore reflect the relative contribution of the husband: the higher the score, the more the

husband contributes to housework. The scores are converted to a scale ranging from 0.10 (wife much more than husband) to 0.90 (husband much more than wife).

Division of child rearing tasks. In the same way as for housework, the respondent was asked retrospectively how she and her husband divided four child rearing tasks (reading to and playing with children, bringing/taking children to school/sports, talking about problems, and going on outings like going to the movies or the zoo). The scores are converted to percentages and reflect the relative contribution of the husband to child rearing.

3.3. Cumulative models

Each of the five dimensions is addressed in separate analyses. The analyses are cumulative in the sense that each model also contains variables from the previous models. To compare the fit of successive models, we calculate the BIC, which is a measure for model fit that takes into account the relation between the number of variables and the number of cases. The more negative the BIC the better the model fit (Raftery, 1996). The BIC is appropriate for our purposes, because it allows for a comparison between models that are not nested.

To assess whether wife's labour market position has become less destabilising over time, we make a distinction between women married from 1943 to 1970 (n=515) and women married from 1971 to 1997 (n= 779). Because women's labour force participation started to increase from 1970 onwards (Van der Lippe and Van Doorne-Huiskes, 1995, p. 111), the cutting point of 1970 seems reasonable. For each dimension, we choose the model that fits the data for the total group best and for this model (with two exceptions), we estimate an interaction model. In this interaction model, we include interaction terms between wife's labour market characteristics and marriage cohort. The interaction models contain main effects of wife's labour market characteristics and interaction effects of these variables and

cohort. We present the results of the interaction models by showing the implied effects of wife's labour market characteristics for each cohort and the difference between the effects for the two cohorts (the size of the interaction effect). The tables also indicate whether the effects for the two cohorts differ significantly.

All the models include three labour market characteristic of the husband: whether the husband works, his educational attainment and his economic occupational status. If a traditional division of labour is beneficial to marital stability, these characteristics should decrease the risk of divorce. In addition, we include a scale measuring the number of financial problems in the household. According to the so-called 'income hypothesis' (Cherlin, 1979), a low household income leads to financial stress, which increases the risk of divorce. Because the labour market characteristics of the wife correlate with the labour market characteristics of the husband and household income, we control for these economic characteristics. All models also include demographic factors which are known to influence divorce from previous research: marital duration, period, presence of children, age at marriage, religiosity, parental divorce, pre-marital cohabitation, and urbanisation. Details about the measurement and the descriptive statistics of the control variables can be found in Table 1.

4. Results

Before turning to the results for the influence of wife's labour market position on divorce, we present the results for a baseline model, which only includes the demographic correlates of divorce (Table 2). We estimate two baseline models. In Model 1, we use a linear term for period and a parabolic specification for duration dependency (using duration and duration squared). Model 2 is less parsimonious but makes fewer assumptions: it contains dummy-

variables for period and dummy-variables for discrete duration intervals. When comparing the BICs of these models, we conclude that the simple linear model (model 1) fits the data better. When looking at the coefficients, we note that the linear period term and the quadratic duration specification are both reasonable approximations. Divorce rates have increased in a linear fashion over time. In addition, we see that risk of divorce first increases with marital duration, and decreases at longer durations. This is consistent with the idea that unhappy couples are the first to split up, which leaves an increasingly selective (happy) sample at longer marital durations.

The results for the other covariates are in line with findings from research in other Western societies. The presence of children, and especially young children, lowers the chance of divorce. Our results also confirm a consistent finding in the literature that people who marry young are more likely to divorce. Women who have a religious background, who did not cohabit before marriage, and who come from rural areas have a lower risk of divorce as well, which supports the idea that traditional norms and social integration are important barriers to divorce. Finally, the positive effect of parental divorce shows that the risk of divorce is transmitted from generation to generation.

{here Table 2}

4.1. Intensity of work

Is there is an effect of the intensity of wife's work on the probability of divorce? The results are shown in Table 3. Model 3A looks at the influence of the employment status of the wife. Working women have a 22 percent ($e^{0.198}$ -1) higher odds of divorce than women who do not work, which supports the division-of-labour hypothesis. If the husband works, the odds of divorce are 32 percent ($1-e^{-0.391}$) lower, which also supports the hypothesis. In addition, we find that financial problems increase the likelihood of divorce, which is in accordance with the income hypothesis.

In model 3B, we make a distinction between full-time and part-time work. Compared to non-working women, the odds of divorce are 33 percent higher for full-timer working women. As expected, the effect of part-time work is smaller and not statistically significant. Part-time working women only have a 13 percent higher odds of divorce. Model 3C shows the results for wife's working hours. Again, we see that a higher intensity of work increases the risk of divorce. A comparison of the BICs for model 3B and model 3C shows that a continuous representation of wife's working hours (3C) fits the data better than a discrete measurement (3B). Apparently, the distinction between part-time and full-time work is not a qualitative difference but simply a matter of more or less hours. Analyses not presented here show that the number of working hours also affects the probability of divorce within the group of working women.

In the last three columns of Table 3, we estimate whether the effects differ between the two marriage cohorts for the best fitting model (3C).[1] The results show that a greater number of working hours only increases the risk of divorce for the older marriage cohort. Further we see that the effect of wife's working hours is significantly reduced across cohorts and is negligible for the younger cohort. As we have argued in the beginning, the decreasing

influence of wife's working hours over time is probably the result of the growing acceptance of female employment. We do not find any significant changes for the influence of the economic characteristics of the husband and the household.

To check how robust these results are, we also estimated models in which we added an interaction of wife's working hours with marital duration. Duration and cohort are correlated, and hence, an interaction with duration may compete with a cohort interaction (South, 2001). If we estimate both interactions, we observe that the interaction of hours worked and cohort is still (marginally) significant. We also examined whether the part-time and full-time dummy-variables interact with cohort. We observe that it is especially the part-time effect that is significantly reduced across cohorts. This interaction effect remains statistically significant when the interaction of marital duration and part-time and full-time work are included.

{Here Table 3}

4.2 The status of work

Does the status of wife's work also affect the likelihood of divorce? In model 4A of Table 4, we add the economic status of wife's occupation. The results show that wife's economic status does not affect the probability to divorce, which is inconsistent with the micro-economic argument that women with greater financial independence are more likely to divorce. In model 4B, we add the cultural status of her occupation. As expected by sociological theory, the findings show that women who are employed in jobs with high cultural status are more likely to divorce than women working in jobs with lower cultural status. The effect of wife's economic status becomes more negative now. This negative effect

is contrary to the idea that wife's greater financial independence increases the risk of divorce, but the effect is only marginally significant. All in all, the evidence for an influence of the status of wife's work is not strong. Adding the economic and cultural status of wife's work to the model does not lead to a better model fit; the BIC of model 4B is less negative than the BIC of model 3B.

Turning to the results for the two cohorts, we see that across cohorts, the status of wife's work has become more important for predicting divorce. The economic and cultural status do not have any influence on the probability of divorce in the older cohort, but the effects are strong and significant for the younger cohort. For the cohort married after 1970, we see that women with a higher economic status are less likely to divorce, whereas women with a higher cultural status are more likely to divorce. The negative effect of economic status for the younger cohort runs counter to the financial independence argument, which would predict a positive effect. Rather than increasing wife's financial independence, wife's income is probably seen as a welcome supplement to the household income.

{Here Table 4}

4.3. Potential labour market success

Is there an effect of potential labour market success on divorce, or is it only her actual position that matters? In Table 5 we present the results for two models. In model 5A we add the educational attainment of the wife and the number of years since the wife left the labour market. Because working women are given a score of zero on the variable measuring the number of years since the wife left the labour market, the effects of part-time and full-time work now represent the difference in divorce probabilities between part-time and full-time

working women on the one hand, and non-working women who just left the labour market on the other hand. We observe first that higher educated women are more likely to divorce than women with less education. The results for investments in the labour market, as measured by the number of years since non-working women left the labour market, are less convincing. Though divorce becomes less likely the longer women have been out of the labour market, the effect is not strong and marginally significant. However, the effects of full-time and part-time work become insignificant, meaning that working women do not have a higher chance of divorce when we compare them to non-working women who left their jobs recently.

In model 5B we add women's work experience as an alternative measure for investments in the labour market. Contrary to expectations, more work experience does not increase the likelihood of divorce. We can conclude that the evidence for an influence of potential labour market success is mixed. Although the difference between working women and non-working women who recently left the labour market is small, suggesting that it is potential and not actual labour market resources that matter, the effects of labour market experience itself are weak. Only wife's education strongly affects the likelihood of divorce, but education also contains a cultural component, such as more progressive norms when people have a higher education. In addition, the fit of the model does not improve after including indicators for potential labour market success.

The results for the two cohorts show that the effect of potential labour market success does not change. The effect of both education and work experience is the same for the young and the old cohort.

{Here Table 5}

4.4. Relative labour market position

Is there an influence of relative measures of the labour market position of the wife? The results are presented in Table 6. In model 6A, we use an asymmetric specification of the effect of the relative labour market position of the wife. We add all four relative measures to the most extensive model so far. The relative measures linearly represent the share of the wife without making a distinction between whether the husband or the wife has the largest share in education, income, economic status or working hours. The findings show that the larger the share of the wife in working hours, education and household income, the higher the probability of divorce. Just as for the absolute measures, these results are in line with the division-of-labour hypothesis.

In the next step, we examined whether the relative model fits the data better than an absolute model. To assess this, we compare model 6A to a model in which the labour market characteristics are represented as separate variables for husbands and wives (BIC=-436, not presented in Table 6). This comparison shows that a relative approach to wife's labour market characteristics does not lead to a better model.

In model 6B, we assess whether the specialization effect is symmetric. If specialization in paid labour reduces the risk of divorce because of greater efficiency gains, specialization should lower the probability of divorce regardless of whether the husband or the wife specializes in the labour market. For example, not only couples in which the husband works more hours than the wife, but also couples in which the wife works more hours than her husband should have a lower probability of divorce than couples who divide paid labour equally. Sociological theory, on the other hand, predicts an asymmetric specialization effect. In light of traditional role expectations, only specialization by the husband should reduce the probability to divorce, whereas specialization by the wife should increase the risk of divorce. To test which argument is right, we use a symmetric specification of wife's relative labour

market position. In particular, we estimate for each labour market characteristic (hours, education, economic status and income) both the effect of wife's share when the husband is the main provider (works the most hours, has the highest income, and so forth), and the effect of wife's share when she is the main provider.[2] If the specialization effect is symmetric, wife's share (e.g., in working hours) should increase the risk of divorce when the husband is the main provider, while wife's share should decrease the risk of divorce when the wife is the main provider.

The results for model 6B show that the specialization effect is not symmetric. The risk of divorce generally increases with wife's relative share in working hours, education and income when the husband is the one who works more hours, has more education and earns more money. However, the probability of divorce does not decrease with wife's share when the wife is the main provider. We should note that the number of marriages where the wife is the main provider is small; 6 percent in which the wife works more hours, 10 percent in which she has a higher economic status, and 7 percent in which she reports that she earns more money. A comparison of the BICs for model 6A and 6B shows that an asymmetric specification of the specialization effect (model 6A), without making a distinction between specialization by the husband or wife fits our data better than a symmetric specification. The probability of divorce monotonically increases with wife's share, irrespective of whether the husband is the main provider or the wife. The results suggest that only a traditional division of paid labour, in which the husband specializes in the labour market, decreases the risk of divorce. This favours a sociological to a micro-economic interpretation of the division-of-labour effect.

In the last three columns we examine whether the effects differ between the two cohorts for model 6A. Contrary to the results for the absolute models, we do not see significant changes in the effect of the relative measures.

{Here Table 6}

4.5. Division of labour in housework and child rearing

How does specialization in housework and child rearing affect the probability of divorce? Table 7 displays the results for the division of housework. In model 7A we look at the effects of five housework tasks separately, because some of the tasks are more female oriented (e.g., laundry) and some more male oriented (e.g., odd jobs). According to micro-economic theory, an increasing relative share of the husband should increase the probability of divorce. After all, increases in the share of the husband generally mean less specialization.

The findings for model 7A show that, depending on the type of task, husband's contribution either has no effect on divorce or a greater contribution of the husband decreases the probability of divorce. Especially for the most male oriented task, doing odd jobs, an increasing share of the husband leads to a lower probability of divorce. These findings are similar to those of previous studies and support the sociological argument that a greater contribution of the husband to housework lead to greater marital satisfaction, which in turn stabilises marriage.

In model 7B we include an overall measure for husband's relative contribution to housework, which is the simple average of the separate tasks. The results show even more clearly that, contrary to micro-economic theory, a more equal division of labour with respect to housework reduces the probability of divorce. It should be noted, however, that our retrospective measurement of the division of labour in the household might bias the effects in a direction favourable to sociological theory. For example, divorced women might have a less positive view on the contribution of their former husband than still married women, which

could partly be the reason for the stabilising influence of husband's contribution to housework. Given the strong effect of husband's share in housework, however, we believe that such a bias cannot be the sole reason for the stabilising influence of husband's share in housework and that sociological notions about fairness play a role as well.

Although the effects are contrary to economic predictions, examining symmetry may give us further insights into the sociological interpretation. If fairness is the correct interpretation, the effect should be symmetric in the sense that when men do more than women, their marriage would also be unstable. These additional analyses show that the risk of divorce decreases with husband's share when the wife is the one who does the lion share of housework. After the point of an equal division of labour, the probability of divorce increases with husband's share when the husband does most of the housework. Hence, the effect is symmetric. This result even more strongly supports the sociological interpretation that an equal division of housework is perceived as fair and therefore best for marital stability. We should note that the group of husbands who do the majority of housework is small and might therefore be selective (6 percent). Hence, we cannot rule out competing interpretations of the fact that the effect is symmetric (e.g., illness of the wife when the husband does most of the housework).

In the last three columns we examine whether the effect differs between the two cohorts for the best fitting model (7B). Although the findings suggest that the stabilising influence of a more equal division of housework is greater for the younger cohort, the difference is not significant.

{Here Table 7 & 8}

In Table 8 we look at the division of labour with respect to child rearing. We only analyse couples with children. Model 8A shows the effects for the four separate child rearing activities. With the exception of reading to and playing with the children, a greater contribution of the husband to the various child rearing tasks decreases the likelihood of marital dissolution, which does not support economic theory. In model 8B we include a measure for the overall share of the husband in child rearing activities. Not surprisingly, more equality in how husband and wife divide child rearing tasks leads to a lower chance of divorce. Interesting to add is that an equal division of child rearing tasks is more important for marital stability than an equal division of housework. The effect of husband's share in child rearing is almost three times as large as the effect of husband's share in housework. We also examined whether the specialization effect for child rearing is symmetric. Just as for specialization in housework, the risk of divorce first decreases with a greater contribution of the husband, and decreases after the point of an equal division of child rearing activities.

When we look at the results for the two cohorts, we see that an equal division of labour in the household has become increasingly important for marital stability when it comes to child rearing. Though a larger contribution of the husband leads to a lower chance of divorce in both cohorts, the effects are stronger for the younger cohort.

5. Conclusion and discussion

By disaggregating wife's labour market position into several dimensions, this study has tried to gain insights into the reasons why work affects divorce. A fair amount of studies in the past have shown that marriages in which the wife works for pay have a higher risk of breaking up than other marriages. This study has replicated this finding with new data from The

Netherlands. These data contain full work histories, they include appropriate control characteristics of husbands, and they cover a broad range of marriage cohorts. Using discrete time event history models, we show that women who work for pay have a 22 percent higher risk of divorce than women who do not work, a fairly substantial destabilising effect on marriage.

There are many interpretations of the work effect, but in the literature, economically oriented arguments dominate. Two arguments can be distinguished, the independence argument, which revolves around the financial costs of a possible break-up, and the specialization argument, which addresses the efficiency gains of task specialization within marriage. Our detailed analysis of the division-of-labour hypothesis has presented new insights into the validity of these two arguments.

If the independence argument is true, one would first expect that women who work more hours and women who work in better paid jobs have a higher risk of divorce than others. The evidence shows that this is only partly true. We do observe an effect of working hours, but the economic status of women's occupation has no positive effect on divorce. The independence argument also implies that women's labour market opportunities should matter, not just her current job and her current working hours. The evidence here is mixed as well. We observe a marginally significant effect of the number of years women have been out of the labour force and we do not see the expected effect of women's years of labour market experience. Women's education does affect divorce in the expected direction, but education not only stands for labour market opportunities, but also for women's value orientations. While there is a strong and significant effect of women's work per se, an interpretation in terms of economic independence does not seem to be plausible.

If the specialization argument is true, one would expect that women's labour market position should primarily matter in relative terms, as indicated by the status of the wife vis-à-

vis that of her husband. In addition, one would expect that the relative status effect is symmetric and that the effect should appear in the domestic domain as well, not just in the market domain. A positive effect of working hours would also be consistent with the specialization argument, but this is not decisive since it is also consistent with other interpretations. The evidence generally appears to be negative. If we look at economic occupational status, working hours, education and income of husbands and wives in a relative fashion, the model is no better than a model which simply uses main effects. Moreover, when we look at non-traditional ways of dividing paid labour (e.g., with the wife working more than the husband), we do not observe the expected effect. Although the number of such marriages is small, marriages in which the wife works more than the husband do not have a lower risk of divorce than marriages in which spouses work equal hours. In other words, the effect is not symmetric and this is contrary to the specialization argument. Finally, there is no evidence at all that specialization in household labour and specialization in child care tasks stabilise marriage. All in all, we conclude that our data and models have invalidated an interpretation in terms of specialization gains to marriage.

While our analyses cast doubt on the validity of economic interpretations of the division-of-labour hypothesis, it is more difficult to decide which non-economic interpretations are valid. There is nonetheless some evidence that supports a sociological argument about normative orientations toward sex roles in society. If disapproval of married women's work and the resulting tensions within marriage are an underlying cause of the division-of-labour hypothesis, we would expect that the effects of work will depend on the historical context. This is exactly what we find. We first observe that the positive effect of women's work on divorce has become smaller across marriage cohorts. For women who married between 1943 and 1970, we find a positive effect of working hours on divorce; for women married after 1970, this effect is smaller and no longer statistically significant. In

addition, we see that the stabilising effect of husband's participation in child care tasks is stronger in the more recent marriage cohort than in the older cohort.

Both findings point in the direction of traditional and modern sex-role attitudes. Traditionally, women's work was not widely accepted and woman's work may have resulted in tension and competition between spouses, which may explain why woman's work tends to destabilise a marriage in the older cohort. Due to the large influx of women in the labour market, women's work has become increasingly accepted, which may explain why working women do not have a higher chance of divorce in the recent marriage cohort. Similarly, due to a shift from traditional to egalitarian sex-role patterns, men are more and more expected to contribute to domestic labour in recent times. Especially among recently married couples, a lack of effort on the part of men may therefore lead to dissatisfaction in marriage which in turn may destabilise marriage. The two interaction effects thus seem to favour a sociological interpretation of the work effect.

We note that even in the older cohort, both modern and traditional norms were operating since a traditional division of paid labour increased marital stability while a traditional division of unpaid labour decreased stability. Hence, we may speculate that in this period, 'modern' norms of fairness in households coincided with 'traditional' norms disapproving of women's work. We end by cautioning that the evidence for sociological hypotheses is indirect. This study has primarily addressed the validity of economic interpretations and it is up to future research to test the suggested sociological interpretations directly.

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Notes

[1] The difference in the coefficients between the cohorts might not reflect real differences, but differences in the degree of residual variation (unobserved heterogeneity) across cohorts (Allison, 1999b). To test whether our results are biased, we also ran heteroscedastic probit models, which take unobserved heterogeneity into account. The results are similar to the results presented here: differences in the effect of wife's working hours between the two cohorts are also significant when unobserved heterogeneity is taken into account. Moreover, the likelihood ratio test for unobserved heterogeneity is insignificant. These results suggest that unobserved heterogeneity does not bias our findings and that the differences in the coefficients reflect true differences between cohorts. Similar analyses for the other dimensions of wife's labour market position also do not point at problems in the interpretation of cohort differences due to unobserved heterogeneity, except that for the analyses in table 8, the interaction between cohort and husband's share in child rearing is not significant when unobserved heterogeneity is taken into account.

[2] We made use of so called 'spline-functions' (Pindyck and Rubinfeld, 1991) to estimate the

effect of wife's share under the two scenarios. Using spline-functions has the advantage that there is no discontinuity; the two regression lines for wife's share intersect at the cutting point when wife's share is 0.50. Another advantage is that we can test whether the effect of wife's share changes significantly after the cutting point of 0.50. Such tests show that none of the effects change after the cutting point, meaning that an asymmetric specification of wife's relative share, that is linear, is the best. Alternative ways, such as adding quadratic terms for wife's share, to test for symmetry also show that an asymmetric linear specification is to be preferred.

References

Allison, P.D., 1984. *Event history analysis. Regression for longitudinal event data*. Sage Publications, Newbury Park.

Allison, P.D., 1999a. *Logistic regression using the SAS system. Theory and application*. SAS Institute.

Allison, P.D., 1999b. 'Comparing logit and probit coefficients across groups', *Sociological Methods and Research* 28: 186-208.

Babka von Gostomski, C., Hartmann, J. and Kopp, J., 1998. 'Soziostrukturelle Bestimmungsgründe der Ehescheidung. Eine empirische Überprufung einiger Hypothesen der Familienforschung' [Social-structural antecedents of divorce], *Zeitschrift für Sozialisationsforschung und Erziehungssoziologie* 18: 117-133.

Beck, N. and Hartmann, J., 1999. 'Die Wechselwirkung zwischen Erwerbstätigkeit der Ehefrau und Ehestabilität unter der Berücksichtigung des Sozialen Wandels' [The interplay between women's work and divorce], *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 51: 655-680.

Becker, G.S., 1981. *A treatise on the family*. Harvard University Press, Boston.

Berk, R.A. and Berk, S.F., 1983. 'Supply-side sociology of the family: The challenge of the new home economics', *Annual Review of Sociology* 9: 375-95.

Berrington, A. and Diamond, I., 1999. 'Marital dissolution among the 1958 British birth cohort', *Population Studies* 53: 19-38.

Bracher, M., Santow, G., Morgan, M. and Trussel, J., 1993. 'Marital dissolution in Australia: Models and explanations', *Population Studies* 47: 403-425.

Brines, J. and Joyner, K., 1999. 'The ties that bind: Principles of cohesion in cohabitation and marriage', *American Sociological Review* 64: 333-355.

Brown, C.C., 1975. 'On the use of indicator variables for studying the time-dependence of parameters in a response-time model', *Biometrics* 31: 863-872.

Cherlin, A., 1979. 'Work life and marital dissolution', in G. Levinger and O.C.Moles (eds.), *Divorce and separation: Context, causes and consequences*. Basic Books, New York, 151-166.

D'Amico, R., 1983. 'Status maintenance or status competition? Wife's relative wages as determinant of labor supply and marital instability', *Social Forces* 61: 1186-1205.

De Graaf, P.M. and Kalmijn, M., 1999. 'Verschillen in echtscheidingscijfers tussen Nederlandse gemeenten: een verklaring vanuit sociologisch en demografisch perspectief' [Differences in divorce rates among Dutch municipalities], *Maandstatistiek van de Bevolking* 47: 15-24.

De Graaf, P.M. and Kalmijn, M., 2001. 'Trends in the intergenerational transmission of cultural and economic status', *Acta Scoiologica* 44: 51-66.

Diekmann, A. and Klein, T., 1991. 'Bestimmungsgründe des Ehescheidungsrisikos. Eine empirische Untersuchung mit den Daten des sozioökonomischen Panels' [Causes of divorce. A test using panel data], *Kölner Zeitschrift für Sociozologie und Sozialpsychologie* 43: 271-290.

Fokkema, T. and Liefbroer, A., 1999. 'Brengt werken echtscheiding dichterbij? De invloed van economische onafhankelijkheid op de echtscheidingskans van vrouwen geboren in de periode 1903-1937' [Does work increase divorce?], *Mens en Maatschappij* 74: 62-81.

Greenstein, T.N., 1990. 'Marital disruption and the employment of married women', *Journal of Marriage and the Family* 52: 657-676.

Hoffman, S.D. and Duncan, G.J., 1995. 'The effect of income, wages, and AFDC benefits on marital disruption', *The Journal of Human Resources* 30: 19-41.

Huber, J. and Spitze, G., 1980. 'Considering divorce: An expansion of Becker's theory of marital instability', *American Journal of Sociology* 86: 75-89.

Johnson, W.R. and Skinner, J., 1986. 'Labor supply and marital separation', *American Economic Review* 76: 455-469.

Kalmijn, M., 1999. 'Father involvement in childrearing and the perceived stability of marriage', *Journal of Marriage and the Family* 61: 409-421.

Kalmijn, M., De Graaf, P. and Uunk, W. 2000. *Codeboek van het survey Scheiding in Nederland 1998 [Codebook to the survey Divorce in the Netherlands]*. ICS Occasional Papers and Document Series. ICS Codebooks – 40. Utrecht University.

Lichter, D.T., McLaughlin, D.K., Kephart, G. and Landry, D.J., 1992. 'Race and the retreat from marriage: a shortage of marriageable men?', *American Sociological Review* 57: 781-799.

Manting, D., 1993. 'Welke vrouwen maken een echtscheiding mee?' [Which women experience a divorce?], *Maandstatistiek van de Bevolking* 41: 18-29.

Manting, D., 1994. *Dynamics in marriage and cohabitation: an intertemporal, life course analysis of first union formation and dissolution.* Thesis Publishers, Amsterdam.

Ono, H., 1998. 'Husband's and wife's resources and marital dissolution', *Journal of Marriage and the Family* 60:674-689.

Oppenheimer, V.K., 1995. 'The role of women's economic independence in marriage formation: A skeptic's response to Annemette Sörensen's remarks', in H.-P. Blossfeld (ed.), *The new role of women. Family formation in modern societies*. Westview Press, Boulder/San Francisco/Oxford, 236-246.

Oppenheimer, V.K., 1997. 'Women´s employment and the gain to marriage: The specialization and trading model', *Annual Review of Sociology* 23: 431-453.

Parsons, T., 1949. 'The social structure of the family', in R. Anshen (ed.), *The family: Its function and destiny*. Harper and Brothers, New York, 173-201.

Peters, E.H., 1993. 'The importance of financial considerations in divorce decisions', *Economic Inquiry* 31: 71-86.

Pindyck, R.S. and Rubinfeld, D.L., 1991. *Econometric models and economic forecasts. Third edition*. McGraw-Hill, New York.

Pit, S. and Rouwendal, J., 1994. 'Een economische analyse van echtscheiding in Nederland' [An economic analysis of divorce in The Netherlands], *Huishoudstudies* 4: 3-13.

Raftery, A.E., 1996. 'Bayesian model selection in social research', in P.V. Marsden (ed.), *Sociological Methodology*. Basil Blackwell, Oxford, 111-163.

Simpson, I.H. and England, P., 1981. 'Conjugal workroles and marital solidarity', *Journal of Family Issues* 2: 180-204.

South, S.J., 2001. 'Time-dependent effects of wives' employment on marital dissolution', *American Sociological Review* 66: 226-245.

South, S.J. and Spitze, G., 1986. 'Determinants of divorce over the marital life course', *American Sociological Review* 51: 583-590.

Spitze, G. and South, S.J., 1985. 'Women's employment, time expenditure and divorce', *Journal of Family Issues* 6: 307-329.

Tzeng, J.M. and Mare, R.D., 1995. 'Labor market and socioeconomic effects on marital stability', *Social Science Research* 24: 329-351.

Van der Lippe, T. and Doorne-Huiskes, J. van, 1995. 'Veranderingen in stratificatie tussen mannen en vrouwen?' [Changes in the stratification of men and women], in J. Dronkers en W.C. Ultee (eds.), *Verschuivende ongelijkheid in Nederland: sociale gelaagdheid en mobiliteit*. Van Gorcum, Assen, 104-125.

Wilkie, J.R., Ferree, M.M. and Ratcliff, K.S., 1998. ‘Gender and fairness: marital satisfaction in two-earner couples, *Journal of Marriage and the Family* 60: 577-594.

Yamaguchi, K., 1991. *Event history analysis*. Sage Publications, Newbury Park.

Table 1. Definitions, means and standard deviations of independent variables

	Mean	Standard deviation [b]
Part-time work of wife (1-34 hours per week)	0.12 [a]	
Full time work of wife (more than 34 hours per week)	0.69 [a]	
Economic status of wife (from 945 to 3153, divided by 10000)	0.16 [a]	0.03
Cultural status of wife (from 2.46 to 5.87)	3.45 [a]	0.60
Education of wife (reported in levels, recoded to formally required years)	11.37 [a]	2.85
Work experience (in years)	0.81 [a]	0.39
Years since having left the labour market (in years, for non-working women)	3.55 [a]	3.33
Wife's relative share in working hours (in proportions)	0.47 [a]	0.25
Wife's relative share in education (in proportions)	0.50 [a]	0.07
Wife's relative share in economic status (in proportions)	0.44 [a]	0.06
Wife's relative share in income (in proportions, in the beginning of the marriage)	0.27	0.24
Husband's relative share in housework (in proportions, beginning of marriage)	0.30	0.14
Husband's relative share in child rearing (in proportions, beginning of marriage)	0.26 [c]	0.13
Paid work of husband (beginning of marriage)	0.85	
Education of husband (highest completed level, in formally required years)	11.47	3.09
Economic status of husband (beginning of marriage)	0.18	0.04
Number of financial problems (beginning of marriage, from 0 to 6)	1.15	1.53
No children	0.87 [a]	
Children living at home and youngest child under 12 years of age	0.13 [a]	
Children living at home and youngest child over 12 years of age	0.00 [a]	
All children living elsewhere (empty nest)	0.00 [a]	
Wife married before the age of 21	0.24	
Religiosity (count of whether respondent and mother church member, frequent church visits in past, ranging from 0 to 3)	1.48	1.04
Parents divorced when the wife was growing up	0.08	
Cohabited with current or former partner before marrying	0.35	
Living in a city (beginning of marriage)	0.69	

[a] Time-varying variable (the mean refers to the first year of marriage).
[b] Standard deviations not reported for dichotomous variables.
[c] Based on respondents with children only (N=1004).

Table 2. Event history models of divorce: Logistic regression coefficients for the baseline models

	Model 1		Model 2	
	ß	Exp (ß)	ß	Exp (ß)
Marital duration (in years)	0.124*	1.131		
Marital duration squared	-0.004*	0.996		
Duration 0-1 years			-0.619*	0.539
Duration 2-5 years			0.430*	1.537
Duration 6-10 years			0.619*	1.857
Duration 11-15 years			0.620*	1.860
Duration 16-20 years			0.690*	1.993
Duration 21-25 years			0.528*	1.696
Duration > 25 years (reference)			0.000	1.000
Period (current year)	0.055*	1.057		
Period < 1960 (reference)			0.000	1.000
Period 1960-1969			0.005	1.005
Period 1970-1979			0.749*	2.114
Period 1980-1989			1.263*	3.537
Period 1990-1998			1.811*	6.117
No children (reference)	0.000	1.000	0.000	1.000
Youngest child under 12	-0.516*	0.597	-0.523*	0.593
Youngest child over 12	-0.098	0.907	-0.067	0.935
All children moved out	0.085	1.088	-0.333	0.717
Wife married before 21	0.200*	1.222	0.210*	1.233
Index of religiosity	-0.165*	0.848	-0.163*	0.850
Parents divorced when growing up	0.330*	1.391	0.335*	1.398
Cohabited before marrying	0.385*	1.469	0.380*	1.462
Living in a city	0.364*	1.439	0.363*	1.437
Number of women	1294		1294	
Number of events	1016		1016	
Number of person-years	19897		19897	
-2 log likelihood	7470		7457	
BIC	-445		-389	

* $p < 0.05$, ~ $p < 0.10$

Table 3. Event history models of divorce: Logistic regression coefficients (ß's) for effects of the intensity of work

	Model 3A	Model 3B	Model 3C	Interaction model [a]		
				Old cohort	Young cohort	Change
Intensity of work						
Whether wife works	0.198*					
Part-time work wife		0.125				
Full-time work wife		0.287*				
Working hours wife			0.008*	0.012*	0.004	-0.008*
Husband/household variables						
Whether husband works	-0.391*	-0.391*	-0.391*	-0.165	-0.463*	-0.297
Education husband	-0.021~	-0.020	-0.019	-0.020	-0.020	0.000
Economic status husband	0.318	0.247	0.235	0.718	-0.129	-0.847
Financial problems	0.064*	0.065*	0.065*	0.090*	0.048	-0.042
Model fit						
-2 log likelihood	7436	7433	7431		7425	
BIC	-430	-423	-434		-382	

* $p < 0.05$, ~ $p < 0.10$

[a] The effects and significance levels for the two cohorts are derived from the main effects in an interaction model, which includes interactions between cohort and wife's labour market characteristics and the husband/household variables. The change in the effect is the difference between the effect for the old cohort and the effect for the young cohort and is tested by looking at the significance level of the interaction terms.

Note: Models control for variables of baseline model 1. The number of person-years is 19897 and the number of events is 1016.

Table 4. Event history models of divorce: Logistic regression coefficients (ß's) for effects of the status of work

	Model 4A	Model 4B	Interaction model [a]		
			Old cohort	Young cohort	Change
Status of work					
Economic status wife	-0.447	-2.443~	2.017	-4.959*	-6.976*
Cultural status wife		0.179*	-0.045	0.313*	0.357*
Husband/household variables					
Whether husband works	-0.394*	-0.383*	-0.183	-0.432*	-0.249
Education husband	-0.019	-0.022~	-0.023	-0.019	0.003
Economic status husband	0.271	0.176	0.775	-0.309	-1.083
Financial problems	0.065*	0.065*	0.092*	0.049~	-0.043
Other variables					
Part-time work wife	0.123	0.118	0.363*	-0.098	-0.461*
Full-time work wife	0.288*	0.301*	0.453*	0.162	-0.292~
Model fit					
-2 log likelihood	7432	7428		7412	
BIC	-413	-408		-335	

* $p < 0.05$, ~ $p < 0.10$

[a] The effects and significance levels for the two cohorts are derived from the main effects in an interaction model, which includes interactions between cohort and wife's labour market characteristics and the husband/household variables. The change in the effect is the difference between the effect for the old cohort and the effect for the young cohort and is tested by looking at the significance level of the interaction terms.

Note: Models control for variables of baseline model 1. The number of person-years is 19897 and the number of events is 1016.

Table 5. Event history models of divorce: Logistic regression coefficients (ß's) for effects of potential labour market success

	Model 5A	Model 5B	Interaction model [a]		
			Old cohort	Young cohort	Change
Potential labour market success					
Education wife	0.053*	0.055*	0.052*	0.055*	0.003
Years from labour market	-0.012~				
Work experience wife		0.002	-0.003	0.003	0.005
Husband/household variables					
Whether husband works	-0.390*	-0.387*	-0.173	-0.439*	-0.266
Education husband	-0.038*	-0.038*	-0.039~	-0.034~	0.005
Economic status husband	-0.161	-0.232	0.352	-0.705	-1.057
Financial problems	0.070*	0.070*	0.088*	0.059*	-0.030
Other variables					
Part-time work wife	-0.050	0.058	0.340*	-0.152	-0.492*
Full-time work wife	0.152	0.248*	0.426*	0.127	-0.299
Economic status wife	-2.494~	-2.484~	2.099	-5.094*	-7.192*
Cultural status wife	0.113	0.108	-0.116	0.246*	0.362*
Model fit					
-2 log likelihood	7412	7415		7399	
BIC	-404	-401		-308	

* $p < 0.05$, ~ $p < 0.10$

[a] The effects and significance levels for the two cohorts are derived from the main effects in an interaction model, which includes interactions between cohort and wife's labour market characteristics and the husband/household variables. The change in the effect is the difference between the effect for the old cohort and the effect for the young cohort and is tested by looking at the significance level of the interaction terms.

Note: Models control for variables of baseline model 1. The number of person-years is 19897 and the number of events is 1016.

Table 6. Event history models of divorce: Logistic regression coefficients (ß's) for effects of relative labour market position

	Model 6A	Model 6B	Interaction model [a]		
			Old cohort	Young cohort	Change
Asymmetric relative position					
Share wife in hours	0.362*		0.431~	0.187	-0.245
Share wife education	1.585*		1.543*	1.457*	-0.086
Share wife economic status	-0.520		0.573	-1.056	-1.630
Share wife income	0.955*		0.796*	1.198*	0.402
Symmetric relative position					
Share hours (husband more)		0.430*			
Share hours (wife more)		0.290			
Share education (husband higher)		1.634~			
Share education (wife higher)		1.497~			
Share ec. status (husband higher)		-1.024			
Share ec. status (wife higher)		0.285			
Share income (husband more)		1.193*			
Share income (wife more)		0.578			
Household variables					
Total hours	0.001	0.001	0.005	-0.000	-0.005
Total education	0.006	0.006	0.008	0.004	-0.004
Total economic status	0.285	0.112	2.316	-0.634	-2.950~
Financial problems	0.065*	0.066*	0.083*	0.053~	-0.030
Other variables					
Cultural status wife	-0.010	-0.002	-0.196	0.057	0.252
Work experience wife	-0.005	-0.007	-0.007	-0.015	-0.008
Model fit					
-2 log likelihood	7385	7383		7370	
BIC	-431	-393		-337	

* $p < 0.05$, ~ $p < 0.10$

[a] The effects and significance levels for the two cohorts are derived from the main effects in an interaction model, which includes interactions between cohort and wife's labour market characteristics and the husband/household variables. The change in the effect is the difference between the effect for the old cohort and the effect for the young cohort and is tested by looking at the significance level of the interaction terms.

Note: Models control for variables of baseline model 1. The number of person-years is 19897 and the number of events is 1016.

Table 7. Event history models of divorce: Logistic regression coefficients (ß's) for effects of the division of housework

	Model 7A	Model 7B	Interaction model [a]		
			Old cohort	Young cohort	Change
Division of housework					
Share husband cooking	-0.057				
Share husband laundry	-0.170				
Share husband cleaning	-0.425				
Share husband odd jobs	-0.573*				
Share husband administration	-0.005				
Share husband housework		-1.264*	-1.146*	-1.399*	-0.254
Husband/household variables					
Whether husband works	-0.416*	-0.425*	-0.247	-0.467*	-0.220
Education husband	-0.034*	-0.031*	-0.034~	-0.024	0.009
Economic status husband	-0.823	-0.505	0.116	-1.017	-1.133
Financial problems	0.050*	0.057*	0.083*	0.043	-0.040
Other variables					
Part-time work wife	0.076	0.059	0.336*	-0.149	-0.485*
Full-time work wife	0.267*	0.265*	0.426*	0.153	-0.274
Economic status wife	-2.538~	-2.794*	2.380	-5.812*	-8.192*
Cultural status wife	0.117	0.139	-0.120	0.303*	0.423*
Education wife	0.063*	0.058*	0.058*	0.057*	-0.001
Work experience wife	0.003	0.002	-0.003	0.005	0.008
Model fit					
-2 log likelihood	375	7389		7372	
BIC	-391	-417		-315	

* $p < 0.05$, ~ $p < 0.10$

[a] The effects and significance levels for the two cohorts are derived from the main effects in an interaction model, which includes interactions between cohort and wife's labour market characteristics and the husband/household variables. The change in the effect is the difference between the effect for the old cohort and the effect for the young cohort and is tested by looking at the significance level of the interaction terms.

Note: Models control for variables of baseline model 1. The number of person-years is 19897 and the number of events is 1016.

Table 8. Event history models of divorce: Logistic regression coefficients (ß's) for effects of the division of child rearing tasks (for couples with children)

	Model 8A	Model 8B	Interaction model [a]		
			Old cohort	Young cohort	Change
Division child rearing					
Share husband reading/playing	0.162				
Share husband transporting children	-0.486~				
Share husband talking to children	-1.046*				
Share husband outings	-1.004*				
Share husband child rearing		-2.408*	-1.680*	-3.246*	-1.567*
Husband/household variables					
Whether husband works	-0.348*	-0.366*	-0.132	-0.496*	-0.364
Education husband	-0.024	-0.025	-0.033	-0.013	0.020
Economic status husband	0.236	0.074	-0.142	0.132	0.274
Financial problems	0.073*	0.075*	0.082*	0.071*	-0.011
Other variables					
Part-time work wife	0.122	0.112	0.416*	-0.181	-0.597*
Full-time work wife	0.187	0.200~	0.450*	-0.005	-0.455~
Economic status wife	-0.996	-1.352	2.258	-5.155*	-7.414*
Cultural status wife	0.055	0.089	-0.132	0.356*	0.487*
Education wife	0.046*	0.048*	0.068*	0.027	-0.040
Work experience wife	0.005	0.005	-0.007	0.023	0.030~
Share husband housework	-0.824*	-0.823*	-0.863*	-0.753~	0.110
Model fit					
-2 log likelihood	5556	5570		5548	
BIC	-432	-447		-342	

* $p < 0.05$, ~ $p < 0.10$

[a] The effects and significance levels for the two cohorts are derived from the main effects in an interaction model, which includes interactions between cohort and wife's labour market characteristics and the husband/household variables. The change in the effect is the difference between the effect for the old cohort and the effect for the young cohort and is tested by looking at the significance level of the interaction terms.

Note: Models control for variables of baseline model 1. The number of person-years is 17570 and the number of events is 757.